



Kid's Sports Corner

at Children's Orthopaedics of Atlanta

PRIMARY CARE SPORTS MEDICINE NEWS

AUGUST 2010

Football Injuries in the Upper Extremities

Part 1

BY: Bill Primos, MD

Acute Traumatic injuries are very common in tackle football. The number of injuries related to football has been estimated to be 600,000 per year. A recent study showed the injury rate among high school football players to be about 0.5 injuries per player per year. Injuries in football occur to all areas of the body including the upper and the lower extremities. This month we will discuss a few of the most common upper extremity injuries that occur in football.

Burner/Stinger The brachial plexus is a structure located in the shoulder. It is formed by a group of nerves that come from the spinal cord. These nerves control sensation and muscle movement of the upper extremity. A stinger or burner is a stretch or pinch injury to the brachial plexus.

A stinger usually occurs when a player is tackling or blocking with the shoulder with the head tilted away from the involved shoulder. As the shoulder is driven down, the brachial plexus is stretched and damaged. The typical presentation is a sudden onset of burning and numbness extending into the arm. There is usually weakness of the arm. Symptoms usually resolve in a few minutes. In more severe cases, the weakness and numbness persists.

The player should be held out of football as long as there is weakness, abnormal sensation, or pain in the upper extremity or neck at rest or during strength testing. Radiographs are obtained if symptoms do not resolve after a few minutes. Symptoms sometimes last weeks. In those cases electromyography and an MRI scan should be obtained.

Treatment includes rest with a sling, range of motion exercises, and possibly medication such as anti-inflammatories and steroids. When

the symptoms resolve, protective equipment such as a neck roll can help prevent re-injury. Rehabilitation exercises for strengthening the neck and upper extremities helps the athlete return to football.

Separated Shoulder A separated shoulder is another very common injury that occurs in football. The acromioclavicular joint is at the junction of the acromion (at the top of the shoulder blade) and



the clavicle (collarbone). A separated shoulder is a sprain of the AC joint that occurs when the player suffers a direct blow to or falls directly on the point of the shoulder. The force of the fall forcibly separates the clavicle from the acromion. There is stretching or tearing of the ligaments.

There are three grades of AC sprain depending on which ligaments are damaged and how much separation there is in the joint. In grade I sprains there is no separation of the joint, but there may be swelling. There is tenderness directly over the AC joint. Grade II sprains have more severe tearing of the ligament and slight separa-

Continued on page 2

tion of the distal clavicle and acromion. There is tenderness over the AC joint and anterior to and slightly below the AC joint. Grade III AC sprains have significant tearing of ligaments and much more deformity and displacement of the joint.

Treatment of a separated shoulder includes ice and rest with immobilization in a sling for comfort. Return to sports is allowed when there is full motion and strength of the shoulder and no pain with testing. Grade III sprains with significant deformity may be treated with surgery if the person is concerned about the appearance. Surgery is not necessary to restore function because shoulders that are operated on do not perform any better than those that are not operated on.

Finger Tendon Injuries There are a couple of finger tendon injuries that occur frequently in football. If these injuries are not recognized and treated correctly, permanent damage and deformity can result.

Jersey Finger is a tear of the tendon on the palm side of the finger. The injury occurs when the player attempts to make a tackle. The finger is caught in the jersey and forcibly extended causing tearing of the tendon. The finger becomes swollen and tender on the palm side. There is inability to actively flex the distal interphalangeal (DIP) joint at the end of the finger.

Treatment of jersey finger is with surgical repair. If it is not repaired in time, the tendon will shrink and not be repairable. The person will

never have normal flexion of the end of the finger.

Mallet Finger is another common injury that occurs in ball sports. It is caused by a direct blow to the tip of an extended finger resulting in tearing of the extensor tendon on the top or dorsal side of the finger. Clinically, there is tenderness and swelling on the dorsal side of the DIP joint and inability to actively extend the joint.

A mallet finger is treated with continuous splinting for six weeks. After six weeks gentle motion exercises are performed and the splint is worn at night for two more weeks.

Notes:

Meet our team of Sports Professionals

at Children's Orthopaedics of Atlanta

For appointments, call 678.686.6800

5445 Meridian Mark Road . Suite 250 . Atlanta, GA 30342

www.childrensortho.com



Michael T. Busch, MD

Board Certified Pediatric Orthopaedic Surgeon
Director of Sports Medicine and Arthroscopic Surgery

Dr. Busch can be contacted at 678.686.6820



David L. Marshall, MD

Board Certified General Pediatrician
Board Certified in Sports Medicine
Medical Director /Sports Medicine Program

Dr. Marshall can be contacted at 678.686.6820



William Primos, MD

Board Certified Pediatrician
Certified Diplomate in Sports Medicine

Dr. Primos can be contacted at 678.686.6820

J. Brian Kelly, PA-C
Certified Physician Assistant

Nancy Kralovich, PA-C
Certified Physician Assistant

Rebecca Lunsford, PA-C
Certified Physician Assistant

Ashley Mezzanotte, PA-C
Certified Physician Assistant

Lynda Palmer, PA-C
Certified Physician Assistant

Wallace E. Wilson, PA-C
Certified Physician Assistant

Derek Zefo, PA-C
Certified Physician Assistant

David Kloehs, M.Ed., ATC
Certified Athletic Trainer